



PIPELINE SAFETY
INSTITUTE

Pipeline Safety

Amendments to Parts 192

*To Require Valve Installation and
Minimum Rupture Detection Standards*

DeWitt Burdeaux

Sr. Executive Consultant

RCP Inc.

Rupture Mitigation Valve (RMV) - Rule Complexity

Applicability

□ Transmission & Type A Gathering

- New definitions
- New valve spacing
- Valve retrofits for class location changes
- Notification of “Potential Rupture”
- RMV closure response time < 30 minutes from rupture verification
- RMV monitoring
- RMV maintenance
- TIMP RMV risk analysis

□ ALL Gas Pipelines, including Gas Distribution

- Emergency response
- Investigation of Failures and Incidents

Rupture Mitigation Valve (RMV) - Rule Complexity

Program Impacts

Design

Construction

Operations

Maintenance

Emergency Response

Control Room
Management

Incident Investigation

Transmission Integrity
Management



New Definitions in §192.3

- ❑ **Entirely Replaced:** Doesn't really mean entirely replaced, it means 2 or more miles within a 5-mile pipeline segment within 24 months period.
- ❑ **Notification of Potential Rupture:** Includes notification, observation, or indications of ...
- ❑ **Rupture Mitigation Valve (RMV):** Includes Automatic Shut-off Valves and Remote Controlled/Remote Operated Valves.

□ After – April 10th, 2023

- *New transmission $\geq 6''$ OD, (includes Type A gathering), RMV must be installed to meet spacing criteria, unless.*
- *Class 1 & 2 (trans & Type A) w/ PIR ≤ 150 feet.*
- *Entirely replaced – same criteria.*

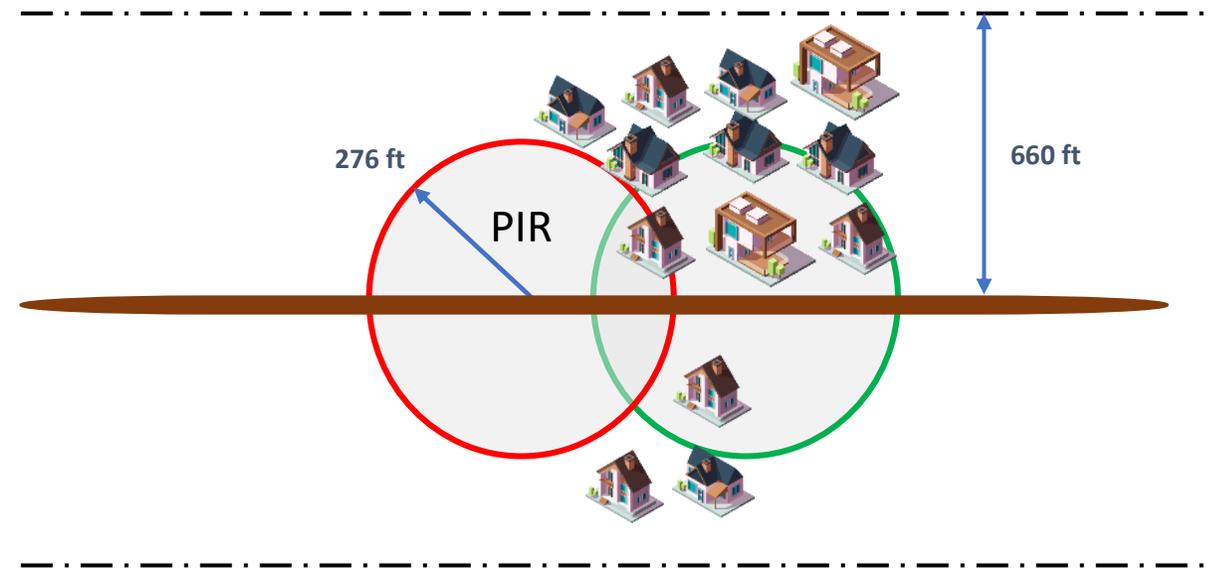
□ Notification required to use alternative(s), except.

- *A manual valve at a continuously manned compressor station may be used.*

**New Valve
Spacing
Requirements
§ 192.179**

Required Retrofitting – §192.634

- ❑ After — April 10th, 2023
 - Install or existing for new or entirely replaced ≥ 6 "OD in HCA's and Class 3 & 4 locations.
 - Specifically exempts Class 1 & 2 w/PIR <150'
- ❑ Operational within 14 days of commissioning the new or replacement line segment.
- ❑ Applicable to all replacements, even if project would not otherwise require the addition or replacement of a valve.



***Pipeline MAOP = 400 psi & Nominal Diameter
= 20 Inches***

$$***PIR = 0.69\sqrt{pd^2} = 276 \text{ Feet}***$$

Required Retrofitting §192.634

Crossovers, laterals & receipt points included:

❑ Laterals

- May locate somewhere other than tap location if < 5% of the volume of shut-off segment.
- May use check valve if lateral is \leq 12-inch – Notification required.

❑ Crossovers

- May use the manual valve if the normal position is closed & LOTO
- Notification required.



Manual Valve (Alternative RMV) 192.634

- Notification & Approval 192.18
- Manual operation procedures must:
 - Designate and locate personnel.
 - Include time for assembly of personnel.
 - Include time to acquire tools and equipment.
 - Include drive time under heavy traffic at the posted speed limit.
 - Include walking time.
 - Include time to shut the valve.
- NTE - 30 minutes of rupture identification.



Notification of Potential Rupture



- ❑ Notification occurs upon first notice or observation.
- ❑ Written procedures to identify:
 - Unanticipated or unexplained pressure loss of 10% of normal operating within 15 minutes or less.
 - Change in flow rate, pressure change, and equipment function.
 - Release of a “large” volume of gas, fire, and explosion.

RMV Response

192.636

- ❑ Be closed within 30 minutes of “identification”.
- ❑ May be left open, IF:
 - Submitted Notification to PHMSA per §192.18.
 - Coordinated with ER to develop procedures.
 - ER concurs.
 - Procedures included as part of Notification.



Maintenance

If a manual or alternative technology is used, select:

- ❑ Within each pipeline and work unit.
- ❑ Annual drill for 30-minute-total response time validation.
- ❑ Worst case conditions for the location.
- ❑ Stipulate the methodology used to conduct a random selection of locations.
- ❑ Document lessons learned



Maintenance

- Remedial measures
 - Repair or replace ASAP not-to-exceed 12-months.
 - Designate an alternate within 7-days.

- ASV's
 - Confirm and document ASV shut-in pressure.
 - Shut-in pressure proven and reset calendar year NTE 15-months.



Continued..

Integrity Management - §192.935(c)(f)

- Risk analysis for gas releases and protection against ruptures.
- Periodic evaluations.
 - Risk analysis and assessments must be reviewed by Senior Executive.
 - Each calendar year, NTE is 15-months.
 - Within 3 months of incident or SRC.

Emergency Response – §192.615

Notice of Potential Rupture

immediately and directly notify 911 or... after receiving a notification of potential rupture to coordinate and share information to determine the location of any release, *regardless of whether the segment is subject to the requirements of §§192.179, 192.634, or 192.636.*



Emergency Response

Develop written rupture identification procedures to evaluate and identify whether a notification of potential rupture is an actual rupture event.

- specify the sources of information
- operational factors
- other criteria
- procedures must provide for rupture identification as soon as practicable.





Investigation of Failures and Incidents / Accidents

Post-failure and incident lessons learned. Develop procedures, implement, and incorporate lessons learned from a post-“failure” or incident review

- Personnel training & qualification programs
- Design
- Construction
- Testing
- Maintenance
- Operations
- Emergency response procedures

This new paragraph doesn't reference the RMVs at all!!!!

Thank You!

DeWitt Burdeaux

dburdeaux@rcp.com

(817) 501-0791

